ON ITERATIONS OF SIMPLE CLOSED GEODESICS ON RIEMANN SURFACES UNDER PSEUDO-ANOSOV MAPS

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Abstract: Let S be an analytically finite Riemann surface with type (p, n), where p is the genus and n is the number of punctures of S. Assume that $3p + n > 4$ and that S contains at least one puncture x. Let $\widetilde{S} = S \bigcup \{x\}$, and $\mathscr{F}$ be the set of pseudo-Anosov maps of S which are isotopic to the identity on $\widetilde{S}$. Let $a \subset S$ be a simple closed geodesic. In the talk, we provide some estimates for lower and upper bounds for the smallest number $K = K(a, S, f)$, where $f \in \mathscr{F}$, so that $(a, f^k(a))$ fills S, for all $k \geq K$.